

WHAT IS CLAIMED IS:

1. A method comprising:
applying carbon dioxide to a surface of a reticle; and
forming a solid carbon dioxide layer on the surface of the reticle at a temperature below a sublimation temperature of carbon dioxide, the solid carbon dioxide layer preventing particles from contacting the surface of the reticle.
2. The method of Claim 1, wherein said applying comprises spraying the surface of the reticle with carbon dioxide and removing particles from the surface with carbon dioxide snow.
3. The method of Claim 1, wherein said applying comprises spraying carbon dioxide snow at a grazing angle with respect to the surface of the reticle.
4. The method of Claim 1, further comprising cooling the reticle to a temperature below a sublimation temperature of carbon dioxide before said forming a solid carbon dioxide layer on the surface of the reticle.

5. The method of Claim 1, wherein said forming a solid carbon dioxide layer on the surface of the reticle comprises spraying carbon dioxide snow at a substantially 90 degree angle with respect to the surface of the reticle.

6. The method of Claim 1, further comprising:
enclosing the reticle with the solid carbon dioxide layer in a carrier; and
maintaining a temperature around the reticle below a sublimation temperature of carbon dioxide.

7. The method of Claim 1, further comprising removing the carrier and inserting the reticle with the solid carbon dioxide layer in a lithography tool.

8. The method of Claim 1, further comprising raising a temperature around the reticle above a carbon dioxide sublimation temperature.

9. The method of Claim 1, further comprising removing the solid carbon dioxide layer from the surface of the reticle.

10. The method of Claim 1, further comprising spraying the surface of the reticle with carbon dioxide inside a lithography tool.

11. The method of Claim 1, further comprising reflecting radiation off the surface of the reticle in a lithography tool.

12. The method of Claim 1, further comprising reflecting extreme ultraviolet radiation off the surface of the reticle in a lithography tool.

13. An apparatus comprising: $\sqrt{\quad}$

a reticle with a layer of carbon dioxide formed on a surface of the reticle, the carbon dioxide layer preventing particles from contacting the surface of the reticle.

14. The apparatus of Claim 13, further comprising a carrier enclosing the reticle, the carrier being adapted to maintain a temperature around the reticle below a sublimation temperature of carbon dioxide.

15. A system comprising: η

a device adapted to apply carbon dioxide onto a surface of a reticle; and

optics adapted to direct radiation from a source to the surface of the reticle to an object.

16. The system of Claim 15, wherein the device is adapted to spray carbon dioxide onto the surface of the reticle at an angle less than 90 degrees with respect to the surface of the reticle.

17. The system of Claim 15, wherein the device is adapted to spray carbon dioxide snow onto the surface of the reticle at a temperature above a carbon dioxide sublimation temperature.